

1 **CLAIMS**

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3 1. A method comprising:

4 detecting, in a system for streaming a plurality of data streams from a

5 server to a client, a potential overburdening of the system;

6 selecting at least one of the plurality of data streams in response to

7 detecting the potential overburdening of the system; and

8 altering playback of the at least one data stream to avoid overburdening the

9 system.

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11 2. A method as recited in claim 1, wherein the detecting comprises

12 detecting a potential overburdening of the system by exceeding a server to client

13 bandwidth devoted to the plurality of data streams.

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15 3. A method as recited in claim 1, wherein the detecting comprises

16 detecting a potential overburdening of the system by exceeding a processing

17 capacity of the client.

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19 4. A method as recited in claim 1, wherein the altering comprises

20 pausing the at least one data stream.

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22 5. A method as recited in claim 1, wherein the altering comprises

23 ceasing time-scale modification of the at least one stream at the client and

24 beginning time-scale modification of the at least one stream at the server.

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1 6. A method as recited in claim 1, wherein the altering comprises
2 reducing a quality of the at least one stream.

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4 7. A method as recited in claim 1, wherein the detecting comprises
5 monitoring the system for the potential overburdening in response to receiving a
6 new request for a new playback speed for the plurality of data streams.

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8 8. A method as recited in claim 1, further comprising:
9 detecting when excess capacity is available in the system; and
10 altering playback of at least one of the plurality of data streams in response
11 to detecting the excess capacity.

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13 9. A method as recited in claim 1, further comprising allowing a user to
14 modify a set of rules used in selecting the at least one of the plurality of data
15 streams.

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17 10. A method as recited in claim 1, further comprising allowing a user
18 to modify a set of rules used to determine the manner in which playback of the at
19 least one data stream is altered.

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21 11. A method as recited in claim 1, wherein the plurality of data streams
22 include one or more of an image stream, a text stream, and an animation stream.

1 **12.** One or more computer-readable memories containing a computer
2 program that is executable by a processor to perform the method recited in claim
3 1.
4

5 **13.** A system comprising:
6 a client computer coupled to a network;
7 a server computer coupled to transmit a plurality of individual data streams
8 to the client computer via the network; and
9 wherein the client computer is to detect when bandwidth from the server to
10 the client computer that is allotted to transmitting the plurality of individual data
11 streams would be exceeded and take action to prevent the allotted bandwidth from
12 being exceeded.
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14 **14.** A system as recited in claim 13, wherein the network comprises the
15 Internet.
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17 **15.** A system as recited in claim 13, wherein the server is to transmit the
18 plurality of individual data streams to the client computer as a composite media
19 stream.
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21 **16.** A system as recited in claim 13, wherein the client computer is to
22 prevent the allotted bandwidth from being exceeded by transferring time-scale
23 modification responsibility from a control component at the client computer to a
24 control component at the server computer.
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1 17. A system as recited in claim 13, wherein the client computer is to
2 prevent the allotted bandwidth from being exceeded by communicating to the
3 server computer to cease transmitting one of the plurality of individual data
4 streams.

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6 18. A system as recited in claim 13, wherein the client computer is to
7 prevent the allotted bandwidth from being exceeded by communicating to the
8 server computer to switch to a lower-resolution version of one of the plurality of
9 individual data streams.

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11 19. A system as recited in claim 13, wherein the plurality of individual
12 data streams include one or more of an image stream, a text stream, and an
13 animation stream.

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15 20. A server computer comprising:
16 a bus;
17 a memory system, coupled to the bus, to store a plurality of instructions;
18 and
19 a processor, coupled to the bus, to execute the plurality of instructions to:
20 receive an indication that time-scale modification for a data stream
21 that was previously performed at a client computer should now be
22 performed at the server computer, and
23 transmit a time-scale modified data stream to the client computer.

1 **21.** A server computer as recited in claim 20, wherein the processor is
2 further to select one of a plurality of pre-stored versions of the data stream to
3 transmit as the time-scale modified data stream.

4
5 **22.** A server computer as recited in claim 20, wherein the processor is
6 further to generate the time-scale modified data stream by dynamically time-scale
7 modifying an original version of the data stream.

8
9 **23.** A server computer as recited in claim 20, wherein the data stream
10 comprises one or more of an image stream, a text stream, and an animation stream.

11
12 **24.** An apparatus comprising:
13 a master control component to maintain a master timeline for a multimedia
14 presentation; and
15 a plurality of individual stream controls corresponding to individual data
16 streams for the multimedia presentation, wherein each of the plurality of
17 individual stream controls is to maintain a timeline for the corresponding
18 individual data stream.

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20 **25.** An apparatus as recited in claim 24, wherein the master control
21 component is also to receive a user request for a new playback speed and
22 communicate the new playback speed to the plurality of individual stream
23 controls.

1 26. An apparatus as recited in claim 25, wherein the master control
2 component is to communicate the new playback speed to the plurality of
3 individual stream controls by sending a message to each of the plurality of
4 individual stream controls.

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6 27. An apparatus as recited in claim 24, wherein each of the plurality of
7 individual stream controls is to monitor the master timeline and adjust the timeline
8 maintained by the stream control to maintain synchronization with the master
9 timeline.

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11 28. An apparatus as recited in claim 24, wherein the individual data
12 streams include one or more of an image stream, a text stream, and an animation
13 stream.

14
15 29. One or more computer-readable media having stored thereon a
16 computer program that, when executed by one or more processors, causes the one
17 or more processors to perform functions including:

18 receiving a user request at a client for a new playback speed of multimedia
19 content being streamed as a plurality of individual streams to the client; and

20 modifying the playback of each stream of the multimedia content in
21 accordance with the new playback speed.

1 **30.** One or more computer-readable media as recited in claim 29,
2 wherein the computer program further causes the one or more processors to
3 perform functions including sending a message to each of a plurality of individual
4 stream controls, the message indicating the new playback speed.

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6 **31.** One or more computer-readable media as recited in claim 30,
7 wherein the function of sending a message comprises a function of sending the
8 message to an individual stream control located at a server streaming the
9 individual stream of the multimedia content.

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11 **32.** One or more computer-readable media as recited in claim 29,
12 wherein the computer program further causes the one or more processors to
13 perform functions including each of a plurality of individual stream controls
14 corresponding to the plurality of individual streams monitoring a master clock and
15 adjusting a local clock to keep synchronized with the maser clock.

16
17 **33.** One or more computer-readable media as recited in claim 29,
18 wherein the computer program further causes the one or more processors to
19 perform functions including performing, by an independent stream control located
20 at the client and corresponding to one of the plurality of individual streams, time-
21 scale modification of the one stream in accordance with the new playback speed.

1 **34.** One or more computer-readable media as recited in claim 29,
2 wherein the multimedia content includes one or more of an image stream, a text
3 stream, and an animation stream.

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5 **35.** A method comprising:
6 receiving streaming text from a server;
7 receiving a user request to change a playback speed of the streaming text;
8 and
9 altering the playback speed of the streaming text in accordance with the
10 user request.

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12 **36.** A method as recited in claim 35, further comprising:
13 detecting a potential overburdening of a system receiving the streaming
14 text; and
15 altering playback of the streaming text to avoid overburdening the system.

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17 **37.** A method as recited in claim 35, wherein the receiving the user
18 request comprises receiving a user request to increase the playback speed of the
19 streaming text.

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21 **38.** A method as recited in claim 35, wherein the receiving the user
22 request comprises receiving a user request to decrease the playback speed of the
23 streaming text.
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1 **39.** A method as recited in claim 35, wherein the altering comprises
2 performing linear time-scale modification in accordance with the user request.

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4 **40.** A method as recited in claim 35, wherein the altering comprises
5 performing non-linear time-scale modification in accordance with the user request.

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7 **41.** One or more computer-readable memories containing a computer
8 program that is executable by a processor to perform the method recited in claim
9 35.

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11 **42.** A method comprising:
12 receiving a plurality of images as streaming image data from a server;
13 receiving a user request to change a playback speed of the plurality of
14 images; and
15 altering the playback speed of the plurality of images in accordance with
16 the user request.

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18 **43.** A method as recited in claim 42, further comprising:
19 detecting a potential overburdening of a system receiving the streaming
20 image data; and
21 altering playback of the streaming image data to avoid overburdening the
22 system.

1 **44.** A method as recited in claim 42, wherein the altering comprises
2 performing linear time-scale modification in accordance with the user request.

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4 **45.** A method as recited in claim 42, wherein the altering comprises
5 performing non-linear time-scale modification in accordance with the user request.

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7 **46.** A method as recited in claim 42, further comprising:
8 receiving each of the plurality of images as a plurality of layers; and
9 wherein the altering comprises, for each of the plurality of images, reducing
10 the number of the plurality of layers that are used to render the image.

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12 **47.** A method as recited in claim 42, further comprising receiving
13 timeline data corresponding to the plurality of images, the timeline data indicating
14 when the plurality of images are to be rendered.

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16 **48.** One or more computer-readable memories containing a computer
17 program that is executable by a processor to perform the method recited in claim
18 42.